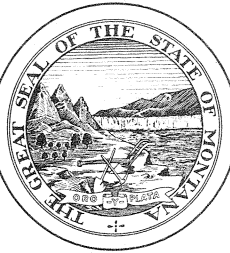


DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION



BRIAN SCHWEITZER
GOVERNOR

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684

STATE OF MONTANA

WATER RESOURCES DIVISION (406) 444-6601
TELEFAX NUMBERS (406) 444-0533 / (406) 444-5918
<http://www.dnrc.mt.gov>

1424 9TH AVENUE
PO BOX 201601
HELENA, MONTANA 59620-1601

Distribution list / EA cover letter:

April 8, 2008

TO: Governor's Office, Bruce Nelson, Rm. 204, State Capitol, P.O. Box 200801, Helena, MT 59620-0801
Environmental Quality Council, Capitol Building, Room 106, P.O. Box 201704, Helena, MT 59620
MT Dept. Environmental Quality, Metcalf Building, P.O. Box 200901, Helena, MT 59620-0901
MT Dept. of Natural Resources and Conservation, 1625 11th Ave. Helena, MT 59620
Director's Office
Information Services Section
Water Resources Division, 1424 9th Ave., P.O. Box 201601, Helena, MT 59620-1601
Trust Land Management Division, 1625 11th Ave. Helena, MT 59620
Bill Schultz, Missoula Regional Office, 1610 S. 3rd St. W., Suite 103, P.O. Box 5004, Missoula, MT 59806-5004
Tony Liane, Southwestern Land Office, 1401 27th Avenue, Missoula, MT 59804
MT Dept. of Fish, Wildlife & Parks, 1420 E. 6th Ave. Helena, MT 59620
Director's Office
Mack Long, Regional Supervisor, DFWP R2, 3201 Spurgin Rd. Missoula, MT 59804
Brad Liermann, Fisheries Biologist, DFWP R2, P.O. Box 924, Philipsburg, MT 59858
MT State Library, 1515 E. Sixth Ave., P.O. Box 201800, Helena, MT 59620
Bill Dennis, Flint Creek Water Users Association, 65 McGuire Ln. Philipsburg, MT 59858
Montana Environmental Information Center, POB 1184, Helena, MT 59624
Montana Audubon Council, P.O. Box 924, Helena, MT 59624
Granite County Commissioners, P.O. Box 925, Philipsburg, MT 59858
Bret Bledsoe, Natural Resources Conservation Service, PO Box 926, Philipsburg, MT 59858
Karen Petersen, Granite Co. Conservation Dist., 105 S. Holland, PO Box 926, Philipsburg, MT 59858
Phil Odegard, HKM Engineering, 7 West 6th Ave. Suite 4W, P.O. Box 1009, Helena, MT 59624
Sunny and Barney Carnagey, 39886 Berenda Rd. Temecula, CA 92591
Wildlife Federation, P.O. Box 1175, Helena, MT 59624
Trout Unlimited, P.O. Box 7186, Missoula, MT 59807
Charlene Gentry, U.S. Forest Service, Pintler Ranger District, 88 Business Loop, Philipsburg, MT 59858
U.S. Army Corps of Engineers, 10 West 15th St., Suite 2200, Helena, MT 59626
Mark Wilson, U.S. Fish and Wildlife Service, MT Field Office, 585 Shepard Way • Helena, MT 59601

Ladies and Gentlemen:

The enclosed draft Montana Environmental Policy Act (MEPA) Environmental Assessment (EA) has been prepared for the East Fork Siphon Replacement Project and is submitted for your consideration. Please feel free to contact me at (406) 444-6622 (e-mail jdomino@mt.gov) should you have any questions or comments. Comments will be accepted until 5:00 p.m., Wednesday, May 7th 2008. Comments can also be mailed to: MT Dept. of Natural Resources and Conservation, State Water Projects Bureau, 1424 9th Avenue, P.O. Box 201601, Helena, MT 59620-1601, attn. James P. Domino. Copies of the EA are available upon request. The EA can also be viewed on the DNRC website at www.dnrc.mt.gov. Thank you.

Sincerely,

Handwritten signature of James P. Domino in cursive.

James P. Domino
Environmental Specialist
State Water Projects Bureau

STATE WATER PROJECTS
BUREAU
(406) 444-6646

WATER MANAGEMENT
BUREAU
(406) 444-6637

WATER OPERATIONS
BUREAU
(406) 444-0860

WATER RIGHTS
BUREAU
(406) 444-6610

Draft MEPA Environmental Assessment



Photograph of Project Location

East Fork Siphon Replacement

March 2008



List of Acronyms and Abbreviations

AIP	Agreement in Principle
COE	U.S. Army Corps of Engineers
DEQ	Montana Department of Environmental Quality
DFWP	Montana Department of Fish, Wildlife, and Parks
DNRC	Montana Department of Natural Resources and Conservation
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
EQIP	Environmental Quality Improvement Program
FCWUA	Flint Creek Water Users Association
MEPA	Montana Environmental Policy Act
NEPA	National Environmental Policy Act
NHP	Montana Natural Heritage Program
NRCS	Natural Resources Conservation Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
SHPO	Montana State Historic Preservation Officer
SWCB	State Water Conservation Board
SWPB	State Water Projects Bureau

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East Fork Siphon Replacement Project: Draft Environmental Assessment and MEPA Checklist

PART I. PROPOSED ACTION DESCRIPTION

1. **Type of proposed state action:** Replacement of the existing East Fork Siphon with a new Structure. Replacement is needed due to the siphon's age and progressive deterioration.
2. **Agency authority for the proposed action:** The Montana Legislature enacted statute 85-1-101(1) through (6) MCA, which states: "It is hereby declared as follows:
 - (1) The general welfare of the people of Montana, in view of the state's population growth and expanding economy, requires that water resources of the state be put to optimum beneficial use and not wasted.
 - (2) The public policy of the state is to promote the conservation, development, and beneficial use of the state's water resources to secure maximum economic and social prosperity for its citizens.
 - (3) The state, in the exercise of its sovereign power, acting through the department of natural resources and conservation, shall coordinate the development and use of the water resources of the state so as to effect full utilization, conservation, and protection of its water resources.
 - (4) The development and utilization of water resources and the efficient, economic distribution thereof are vital to the people in order to protect existing uses and to assure adequate future supplies for domestic, industrial, agricultural, and other beneficial uses.
 - (5) The water resources of the state must be protected and conserved to assure adequate supplies for public recreational purposes and for the conservation of wildlife and aquatic life.
 - (6) The public interest requires the construction, operation, and maintenance of a system of works for the conservation, development, storage, distribution, and utilization of water, which construction, operation, and maintenance is a single object and is in all respects for the welfare and benefit of the people of the state.

Name of project: **East Fork Siphon Replacement Project**

3. Name, address and phone number of project sponsor(s) (if other than the agency):

Natural Resources Conservation Service, Montana State Office
10 East Babcock Street, Federal Building, Room 443
Bozeman, MT 59715-4704, Phone: (406) 587-6811

State Water Projects Bureau
MT. Dept. of Natural Resources & Conservation
1424 9th Ave., P.O. Box 201601,
Helena, MT 59620-1601, Phone: (406) 444-6646

4. Construction Timeline:

Estimated Commencement Date: October 2008

Estimated Completion Date: March 2009

Current Status of Project Design (% complete) 100%

5. Location affected by proposed action (county, range and township):

The siphon is located in Granite County, Township 5N, Range 5W, SW ¼ Section 25 (private land), NW ¼ Section 36 (State School Trust Land Section), approximately 10 miles southwest of Philipsburg. The DNRC possesses a permanent easement for the operation, maintenance and repair of the project (See Figure 2 on page 4 for local area map)

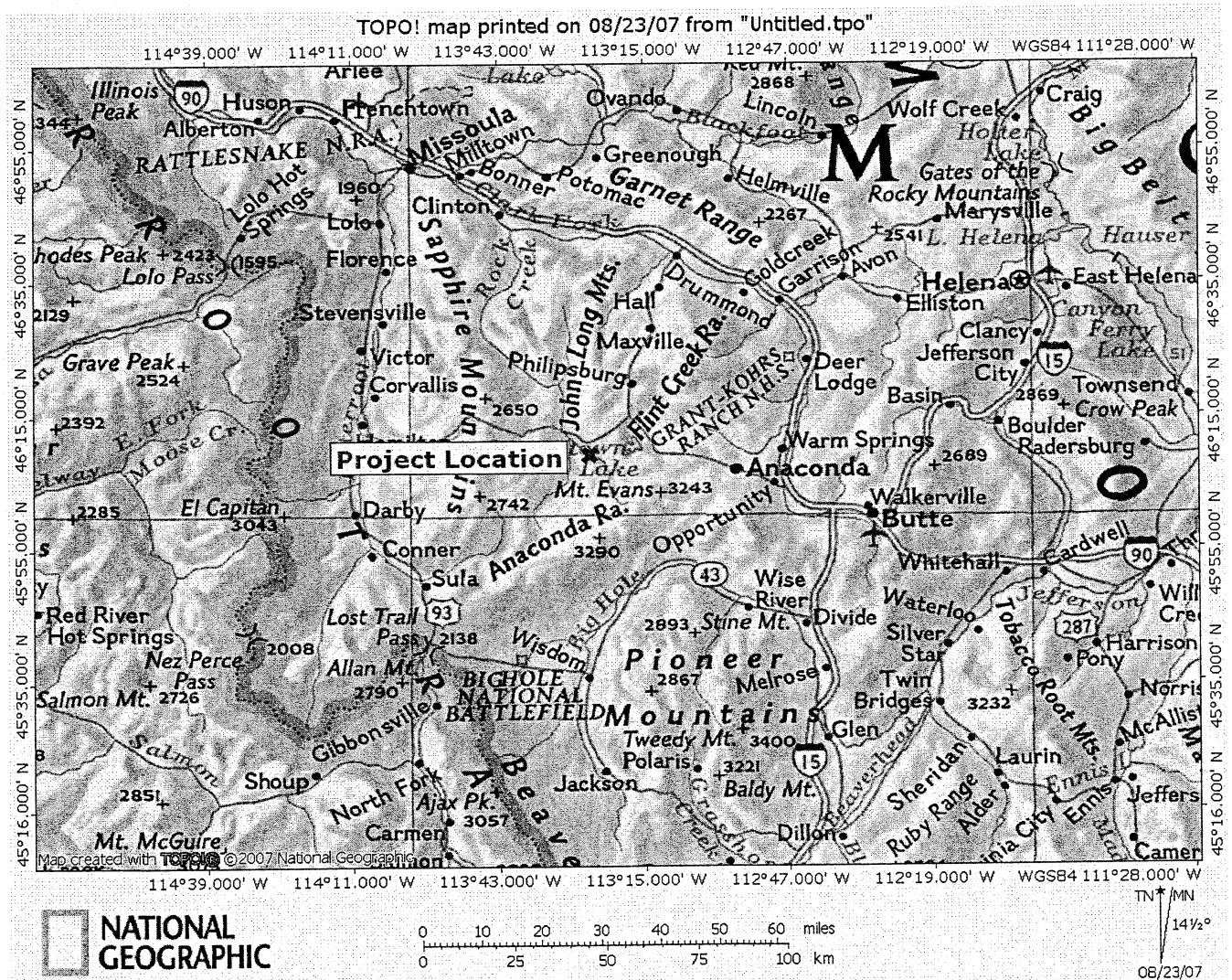


Figure 1. Project Location Map

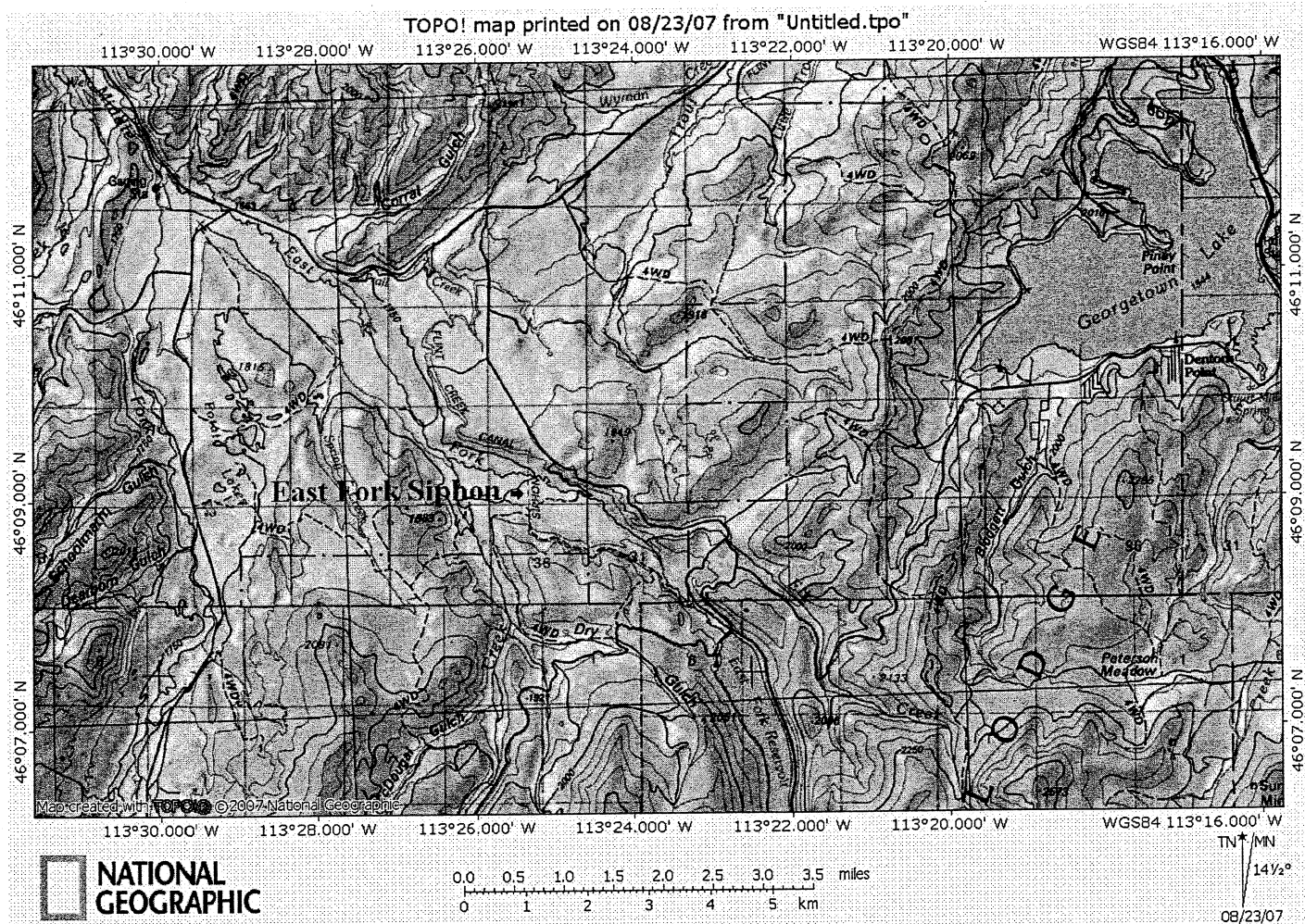


Figure 2. Local area map of the East Fork Siphon and the Flint Creek Water Project

6. **Project size -- estimate the number of acres that would be directly affected that are currently:**

	<u>Acres</u>		<u>Acres</u>
(a) Developed:		(d) Floodplain	<u>0</u>
Residential	<u>0</u>		
Industrial	<u>0</u>	(e) Productive:	
		Irrigated cropland	<u>0</u>
(b) Open Space/Woodlands/Recreation	<u>0</u>	Dry cropland	<u>0</u>
		Forestry	<u>0</u>
(c) Wetlands/ <u>Riparian Areas</u>	<u>1</u>	Rangeland	<u>9</u>
		Other	

7. **Local, State or Federal agencies that have overlapping or additional jurisdiction.**

(a) **Permits: All permits will be obtained prior to applicable project construction.**

The following permits would be needed:

<u>Agency Name</u>	<u>Permit</u>	<u>Status</u>
MT Dept. of Fish, Wildlife & Parks	MT Stream Protection Act (124) Permit	Pending
MT Dept. of Environmental Quality	Short-Term Exemption from Surface Water Quality (318 Authorization)	Pending
MT Dept. of Environmental Quality	Construction De-Watering Permit	Pending
MT Dept. of Environmental Quality	Stormwater Permit	Pending
U.S. Army Corps of Engineers	Federal Clean Water Act (404 Permit)	Pending
MT State Historic Preservation Office	Cultural Clearance	Obtained
U.S. Fish and Wildlife Service	Incidental Take Permit (Bull Trout)	Pending

(b) **Funding:**

<u>Agency Name</u>	<u>Funding Amount</u>
DNRC (Water Storage Account)	\$300,000
DNRC (Hydroelectric Account)	\$320,000
DNRC Renewable Resource Loan	\$400,000
DNRC Renewable Resource Grant	\$100,000
DNRC In-Kind Contribution (siphon)	\$58,068
DNRC In-kind Contribution (canal)	\$43,204
Flint Creek Water Users In-kind Contribution	\$12,450
Federal Match (NRCS – EQIP)	<u>\$902,684</u>
	Total \$2,136,406

(c) **Other Overlapping or Additional Jurisdictional Responsibilities:**

<u>Agency Name</u>	<u>Type of Responsibility</u>
State Historic Preservation Office	Cultural Resource Protection
DNRC Trust Land Management Division	Land Owner (section 36)
Natural Resources Conservation Service	National Environmental Policy Act and Endangered Species Act Compliance

Narrative summary of the proposed action including benefits and purpose:

The Flint Creek Water Project, located in Granite County, was completed in 1938. A main component of the Project, the East Fork Siphon conveys water from the 16,040 acre-foot East Fork Reservoir to a forty-mile network of irrigation canals. The 64 year-old siphon is slowly deteriorating from corrosion. It is composed of a 54-inch diameter steel pipe (1/4" thick), measuring 4056-feet in length. It conducts a flow of 150 cfs during the irrigation season peak. The project irrigates most of the upper and lower Philipsburg Valley. The siphon is located in Granite County, Township 5N, Range 5W, SW ¼ Section 25 (private land), NW ¼ Section 36 (State School Trust Land Section), approximately 10 miles southwest of Philipsburg. The DNRC has a permanent easement for the operation, maintenance and repair of the project. In the last four years, the siphon has been shutdown several times in order to repair nine holes, two cracks, and one concrete pipe-anchor. The siphon now risks total structural failure due to its age and progressive deterioration and needs to be replaced. The proposed action involves the replacement of the existing siphon with a similar structure. The old siphon would be excavated, removed and disposed of off-site at an appropriate facility. A new siphon of similar design and capacity would then be installed in the same location. A tracked excavator, backhoe, front-end loader, bull dozer, truck mounted crane, trailer mounted pumps, concrete truck, compressors and generators and dump trucks would be the main equipment used for the construction. Approximately 10 (linear) surface acres would be disturbed by the construction. The East Fork of Rock Creek would have to be crossed during the excavation and removal of the old siphon and the installation of the new structure. The creek crossing area would be dewatered by the use of a cofferdam upstream from the siphon. Flows in the East Fork of Rock Creek would be diverted using a temporary culvert and returned to the creek downstream from the construction area. Downstream flows would be maintained throughout the duration of the project to minimize potential impacts to water quality, quantity and fisheries. A temporary equipment crossing would also be constructed over the creek. The equipment crossing would be removed upon completion of the project, with all disturbed areas reclaimed and reseeded. Weed control would also be implemented. It is anticipated that the new siphon would have a design life of 50 to 75 years and would continue to serve as a main component of the Flint Creek Water Project, allowing for the continued use of water from the East Fork Reservoir. Sustaining the area's economy, providing irrigation and stock water, protecting bull trout and other fisheries resources, wildlife habitat, wetlands, and recreational use would be important benefits of this project.

The Montana DEQ, State Historic Preservation Office and Natural Heritage Program have been contacted concerning potential impacts to water resources, historic resources and the presence of any species of special concern within the vicinity of the proposed project, respectively. Montana Fish, Wildlife and Parks have been consulted concerning potential impacts to fish and wildlife. The Corps of Engineers have been contacted on 404 permitting requirements. The Natural Resources and Conservation Service (NRCS) and U.S. Fish and Wildlife Service (USFWS) were also consulted. A Natural Heritage file search indicated that Bull trout (a threatened species) and Westslope cutthroat trout (species of special concern) are found in the East Fork of Rock Creek. The lynx is also listed as threatened in the western third of Montana (including the project area). No other wildlife or fish species of special concern is known to exist in the vicinity of the project.

The Endangered Species Act (ESA) requires all federal agencies to consult with the USFWS on potential impacts to any listed species. The lead federal agency sponsor is also responsible for compliance with the National Environmental Policy Act (NEPA), the federal equivalent of the Montana Environmental Policy Act (MEPA). The NRCS, as the lead federal agency sponsor, initiated consultation with the USFWS on the potential impacts to Bull Trout resulting from the proposed project. The DNRC also participated in the consultation as owners of the East Fork Project. At the request of the USFWS, the NRCS completed a Biological Assessment (BA) on impacts to Bull Trout from the project.

The U.S. Fish and Wildlife Service authorized the project to proceed and is in the process of developing an Agreement in Principle (AIP) that would allow for the issuance of a temporary, incidental take permit for Bull Trout for the entire Flint Creek Project. The AIP would be issued under the condition that the DNRC would replace the existing diversion on the main canal with a new structure that would include a fish screen to prevent bull trout from entering the canal. The new diversion and fish screen would be installed within 5 years. Once the new diversion and fish screen are in place the temporary take permit would become permanent.

It is anticipated that the siphon replacement project will not cause any significant or long-term, permanent adverse impacts to the environment. The final design plans are provided in Appendix A. The NRCS Bull Trout Biological Assessment and DNRC letter on the future Main Canal Diversion replacement is provided in Appendix B.

The following photographs (including the cover page) were taken during a site visit in May, 2006:

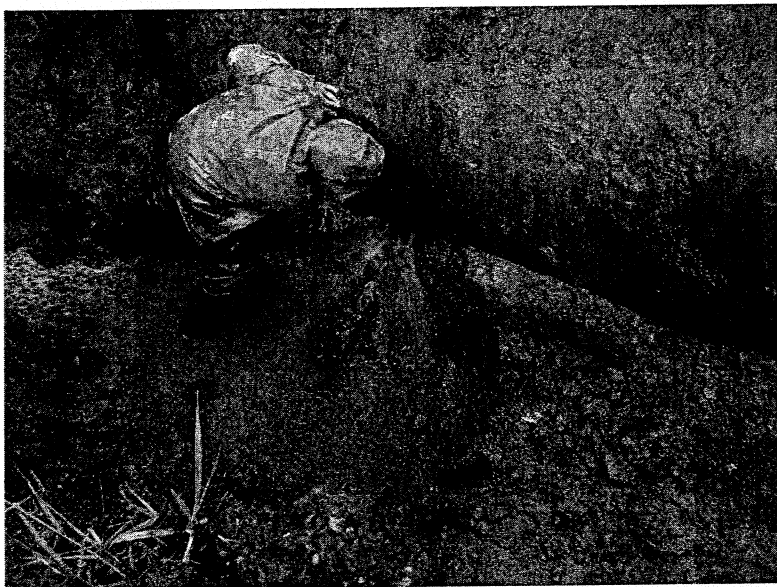


Figure 3. Significant
(typical) leak



Figure 4. Metal straps
of pipe anchor
replaced.



Figure 5. Seepage from the siphon.



Figure 6. Close-up of corrosion and pitting in siphon interior.

PART II. ENVIRONMENTAL REVIEW

- 1. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:**

Alternative A: No Action

**** Pease Note: The following is an analysis of the No Action Alternative as written by the Natural Resources Conservation Service, Columbia Basin Area Office, Missoula, Montana, submitted in 2003 as part of a technical assistance funding request:**

EAST FORK SIPHON PROJECT; ANALYSIS OF THE NO ACTION ALTERNATIVE

BACKGROUND

In 2003 the Flint Creek Water Users of Granite County, Montana requested technical and financial assistance from the NRCS to replace the East Fork Siphon. NRCS determined the project to be eligible for assistance through the Environmental Quality Improvement Program. The purpose of the project is to conserve water while meeting the irrigation needs of the water users and, protecting and enhancing recovery of native fisheries including the threatened bull trout.

The infrastructure, dam, canal, and siphon, for the Flint Creek Water Users irrigation water delivery system was completed in 1938 and put into service during the 1939 irrigation season. The average annual discharge of the Flint Creek Watershed is 99,000 acre feet (SCS 1990). The East Fork Siphon augments this flow by transferring 27,800 acre feet of water from the Rock Creek watershed to the Flint Creek watershed (Mt. State Engineer's Office, 1959). Water transferred to the Flint Creek watershed represents an addition of 28 per cent to the total annual discharge. The 54 inch diameter, 4,056 foot long siphon is now 65 years old. The expected life of the siphon was 50 years. In June of 2001 the siphon burst, causing the structure to be shut down, drained, and welded. Each year more corrosion holes have been found and repaired (S.G. Pinney and Associates, 2002).

Water from the Rock Creek Watershed provides all or part of the irrigation water for 53 operating units. These units are predominantly cow-calf operations. Hay production is used as winter feed for cattle. The primary agricultural product marketed from the area is calves (Meissner, 2004 per. com).

THE NO ACTION ALTERNATIVE:

Evaluation of the no action alternative is properly conducted not as the absence of action but rather as not meeting a need. In the absence of meeting a need the foreseeable impacts and chains of cause and effects are followed to a logical conclusion. In this case not taking action to replace the siphon will result in the eventual failure of the siphon and hence the irrigation system. The following outlines the reasonable and foreseeable impacts connected to the failure of the East Fork siphon.

ECONOMIC IMPACTS

Fifty-three operating units depend on East Fork Siphon water for all or part of their irrigation water (Ibid). Irrigated hay production in the Philipsburg Valley averages 2.25 tons per acre. In the lower Flint Creek Valley irrigated hay production averages 3.5 tons per acre (DNRC, 1996). Non-irrigated hay yields for these areas are 0.6 tons per acre and 1.5 tons per acre respectively (NRCS, 1996). Production would be reduced by more than 73 per cent in the Philipsburg area and 57 per cent in the lower Flint Creek Valley with the loss of irrigation water.

Hay from this area is used primarily as winter feed for cattle. It is not generally sold as a cash crop (Meissner, 2004 per. com.). Assuming cattle numbers remain constant, the lost production would have to be replaced with purchased hay. It requires approximately 2.5 tons of hay to over winter a cow (Wiersum, 2004 per com.). Replacement of lost production with purchased hay increases the cost of maintaining a cow by \$108 per year in the Philipsburg area and \$86 in the lower valley. Assuming a 90 per cent calf crop and a 500 pound calf in November sold for 0.97 per pound (Peel and Moyer, 2002) the increase in production cost represents 20 -25 per cent of gross sales.

Many factors influence the viability of an agricultural enterprise including debt load, markets, labor costs, and enterprise diversification. The individual viability of the 53 producers using East Fork Siphon irrigation water is unknown. However, it is reasonable to say that few agricultural enterprises have large margins and increases in production costs as large as those outlined above can place an operation in peril. Development pressures are increasing in Montana. The Philipsburg area, with the expansion of Discovery Basin Ski Area, is particularly vulnerable to conversion to non-agricultural use.

ENVIRONMENTAL IMPACTS

Reduced profit margins resulting from the loss of irrigation water will impact the human environment in some foreseeable ways. Having to purchase winter feed could result in cattle being turned on to range earlier and being held there later than is good for range health. Of particular concern would be the potential impacts on riparian areas. By extending the grazing season in both the spring and the fall could result in riparian degradation. Grazing riparian areas in both the spring and the fall is particularly detrimental to woody vegetation (Elmore and Kauffman, 1994).

Reduction of woody vegetation would adversely impact whitetail deer by reducing forage and cover resources. Neo-tropical migrant birds would be adversely impacted by a reduction in nesting habitat and increased vulnerability to nest predation and nest parasitism.

The aquatic environment would be impacted by increased thermal pollution, increased sedimentation and, reduced input of terrestrial carbon to the aquatic food chain. Increased water temperature could result in a change in both the vertebrate and invertebrate faunas. Reduction in imported carbon could reduce production of invertebrates and hence vertebrates in the system. Fewer fish could result in additional economic impacts to the area by reducing the number of angler days on Flint Creek.

Change in land use from agriculture to rural subdivisions is a possibility as the economic viability of agriculture is reduced. Subdivision development will fragment big game winter range. Elk are currently

using forage produced on irrigated land during the late summer and fall in preparation for the rut and gaining weight for winter (Firebaugh, MTFW&P, 2004 per com.). Fragmentation of winter range and elimination or reduction on the amount of irrigated alfalfa available could reduce the elk herds in the area. Reduced elk numbers would further impact the area economically by reducing hunter days in the area.

Change in land use could also impact the aquatic environment. Increased nutrient and toxicant input to Flint Creek from lawn chemicals and septic systems may occur. This could lead to eutrophication, depleted oxygen content, and thermal pollution impacting the fishery. The U.S. Fish and Wildlife Service (2002) identified residential sprawl as among the greatest threats to the recovery of bull trout in the Upper Clark Fork Recovery Unit (Including Flint Creek).

As stated earlier, the diversion of nearly 28,000 acre feet of water annually from the Rock Creek watershed to the Flint Creek watershed represents 22 percent of the total annual average discharge for the watershed (NRCS 1990). Irrigation water return flow in the basin during October range from 15 to 50 cubic feet per second. These return flows represent from 12 – 38 per cent of the total flow at that time of the year. During the irrigation season return flows can account for 91 per cent of the total flow in Flint Creek (MT DNRC, 1997). Clearly, the elimination of 28,000 acre feet of water from the irrigated lands will have significant impacts on the late season flow regime of Flint Creek. Reductions in flows could result in both thermal and physical barriers to fish migration interrupting the life cycles of the threatened Bull Trout and the species of special concern, West Slope Cutthroat Trout.

The entire length of Flint Creek has been identified as Bull Trout Habitat (USF&WS, 2002). The lower reaches are designated as foraging, movement, and over-winter habitat. The upper reaches of Flint Creek and all of its' tributary, Boulder Creek have been identified as critical bull trout habitat (USF&WS 2002). Not taking action to replace the siphon and maintain the current flow regime in Flint Creek could be construed as a violation of Section 7, (1), (A) of the Endangered Species Act. This section directs federal agencies to utilize their authorities in furtherance of the purposes of the act.

National Wetland Inventory data is not available for Granite County (USFWS, 2004, per. com.). An approximation of wetlands associated with Flint Creek was created using Soil Survey data (NRCS 1996) with hydric soils as surrogates for wetlands. The Soil Survey indicates there are 5,520 acres of hydric soils and 616 acres of soils with hydric inclusions associated with Flint Creek. Failure of the siphon would result in a 22 per cent reduction in annual average discharge of Flint Creek. The magnitude of this reduction of water in the basin would undoubtedly impact wetlands negatively. Many of these wetlands may be artificial or at least enhanced by the addition of irrigation water. However, Executive Order 11990 makes no distinction between artificial and natural wetlands. It simply establishes a policy of no net loss of wetland acres.

Documentation and calculations used in this analysis are on file in the NRCS Columbia Basin Area Office, Missoula, Montana.

LITERATURE CITED

- Elmore, Wayne and Boone Kauffman. 1994. Riparian and Watershed Systems: Degradation and Restoration. In; Ecological Implications of Livestock Herbivory in the West.
- Firebaugh, John, Wildlife Manager, Montana Department of Fish, Wildlife, and Parks. 2004. Personal Communication.
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- Montana State Engineer's Office, 1959. Water Resources Survey, Granite County, Montana.
- Peel, Derrell and S. Myer. 2002. Cattle Price Seasonality. Livestock Marketing Information Center.
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- USDA-Natural Resources Conservation Service. 1996. Soil Survey of Granite County Area, Montana.
- USDI-Fish and Wildlife Service. 2002. Chapter 3, Clark Fork River Recovery Unit, Montana, Idaho, and Washington. 285p. U.S. Fish and Wildlife Service. Bull Trout (*Salvelinus confluentus*) Draft Recovery Plan. Portland, Oregon.
- USDI-Fish and Wildlife Service. 2002. 50 CFR, Part 17. Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Klamath River and Columbia River Distinct Population Segments of Bull Trout. Federal Register, Vol. 67, No. 230.
- Wiersum, Tim, Forester, USDA-NRCS. 2004. Personal Communication.

End of NRCS Inserted No Action Alternative Narrative

Alternative B: Proposed Action / Preferred Alternative

Note: additional detail and evaluation of the Proposed Action is included in Part V. The Environmental Review Checklist begins on page 15.

In the preferred Alternative, the Siphon would be replaced with a similar new structure. The replacement structure, which would have a design life of 50 to 75 years, would continue to serve as a main component of the Flint Creek Water Project, and allow for the continued conveyance of water from the East Fork Reservoir. Sustaining the area's agricultural economy, providing irrigation and stock water, protecting bull trout and other fisheries resources, wildlife habitat, wetlands, and recreational use would be achieved under this alternative. Detailed design plans (i.e. pipe material, size, etc.) for the preferred alternative are provided in Appendix A.

Alternative C: Lining the existing pipe

This alternative was not considered feasible due to the highly deteriorated condition of the existing pipe. The capacity of the siphon would also be reduced to an unacceptable level under this alternative.

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

The permits and associated stipulations involving the construction of the new siphon are listed in Section 7(a) on page 5 and discussed on page 6 and in Part V, Section 4A (3 and 5) on pages 17 and 19 respectively.

PART III. PUBLIC PARTICIPATION

1. Describe the level of public involvement for this project if any, and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

The public will be notified by way of a public notice on DNRC web page at **www.dnrc.mt.gov**. Individual notices will be sent to the State Water Projects Bureau standard EA distribution list (as presented on the cover page of this EA) and to those that have requested a copy.

Duration of comment period:

A 30-day comment period will be provided. This level of public involvement is appropriate for the scale and scope of the proposed action. Opening and closing dates for comments are provided on the EA Cover Letter and Distribution List.

PART IV. EA PREPARATION

- 1. Based on the significance criteria evaluated in this EA, is an EIS required? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.**

Based on an evaluation of the primary, secondary, and cumulative impacts to the physical and human environment under the Montana Environmental Protection Act (MEPA), this environmental review found no significant impacts from the proposed action. In determining the significance of the impacts, the DNRC assessed the severity, duration, geographic extent, and frequency of the impact, the probability that the impact would occur or reasonable assurance that the impact would not occur, growth-inducing or growth inhibiting aspects of the impact, the importance to the state and to society of the environmental resource or value affected, and precedent that would be set as a result of the proposed action that would commit the DNRC to future actions; and potential conflicts with local, state or federal laws. Therefore, an EA is the appropriate level of review and an EIS is not required.

- 2. Name, title, address and phone number of the person(s) responsible for preparing the EA:**

James P. Domino
Environmental Science Specialist
State Water Projects Bureau
Montana Department of Natural Resources and Conservation
1424 9th Avenue, P.O. Box 201601
Helena, MT 59620-1601
(406) 444-6622
e-mail jdomino@mt.gov

- 3. List of agencies consulted during preparation of the EA:**

Montana Department of Fish, Wildlife & Parks
Montana State Historic Preservation Office
Montana Natural Heritage Program – Natural Resources Information System
Montana Department of Environmental Quality
U.S. Army Corps of Engineers
Natural Resources Conservation Service
U.S. Fish and Wildlife Service

PART V. ENVIRONMENTAL REVIEW CHECKLIST

4. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Soil instability or changes in geologic substructure?			X			1a.
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?			X			1b
c. **Destruction, covering or modification of any unique geologic or physical features?		X				1c.
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X			1d.
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources:

1a. The excavation for the removal of the old siphon and installation of a new structure would not significantly affect geologic substructure or soil stability. The disturbed area (approximately 10 linear surface acres) would be regraded and reclaimed to the approximate original contours upon project completion.

1b. Soil would be disturbed during the excavation and construction process, which will cause some erosion, compaction, and loss of soil over-covering. The effects would be minor and non-significant. All disturbed areas would be reclaimed and regraded.

1c. No unique geologic features would be destroyed, covered, or modified by the proposed action.

1d. Minor, temporary changes to deposition patterns related to siltation may occur from the proposed action due to the need to cross the East Fork of Rock Creek as part of the construction. The effects would be short-term and non-significant. The creek would be temporarily diverted by a cofferdam to dewater the excavation area. A pipe would transfer water around the coffer dam and discharge back into the creek downstream from the work site while a temporary equipment crossing was constructed. The use of erosion control structures and best management practices as prescribed by the MT DEQ, MT DFWP and other pertinent agency permitting requirements would serve to mitigate any temporary adverse impacts.

2. <u>AIR</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)			X			2a.
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (attach additional pages of narrative if needed):

2a. Minor and temporary dust and vehicle emissions would be created by equipment during construction. The effect would be non-significant and end with the completion of the project.

3. <u>WATER</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated*	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X			3a.
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?			X			3c.
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?			X			3.h
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. Effects on any wetlands		X				
m. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (attach additional pages of narrative if needed):

3a. The proposed action may cause an increase in turbidity, but the increase would be temporary and non-significant. Stipulations limiting surface water discharge turbidity as required under the DEQ MPDES permits would be closely monitored and adhered to.

3c. The creek would be temporarily diverted by a cofferdam to dewater the excavation area. A pipe would transfer water around the cofferdam and discharge back into the creek downstream from the work site while a temporary equipment crossing was constructed. Flows would be maintained throughout the duration of the project. The use of erosion control structures and best management practices as prescribed by the MT DEQ, MT DFWP and other pertinent agency permitting requirements would serve to mitigate any temporary adverse impacts. The maximum creek diversion duration will be 10 days. Impacts are non-significant in the long-term.

3h. The risk of water contamination exists during construction of the stream crossing and while pumping water from the pipe trench. This impact is minor, temporary, non-significant and would end with the completion of the project. The risk would be mitigated by insuring that all equipment is properly maintained with no fluid leaks. Construction equipment refueling would take place at an off-site location away from the East Fork of Rock Creek, associated riparian zone, and any wetland areas, in compliance with the DEQ Stormwater Pollution Prevention Plan and General Permit for Discharge Associated with Construction Activity.

4. <u>VEGETATION</u> Will the proposed action result in?	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				
b. Alteration of a plant community?			X			4b.
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				4c.
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			X			4e.
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation (attach additional pages of narrative if needed):4a.

4b. Some native grasses, sage, trees and shrubs would be disturbed from the excavation and installation of the new siphon. The impacts would be non-significant and minor and are negligible due to reclamation and reseeding of the disturbed area.

4c. A Natural Heritage Program file search was completed to determine if any plant species of special concern were present in the location of the project. There are no documented files or observations of any threatened or endangered plants, or plant species of special concern within the project site.

4e. An increase in noxious weeds may occur due to soil disturbance and equipment operation. Effects are negligible in the long-term because of reclamation and weed control implementation.

** 5. FISH/WILDLIFE Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?		X				
c. Changes in the diversity or abundance of non-game species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?			X			5e.
f. Adverse effects on any unique, rare, threatened, or endangered species?			X			5f.
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X			5g.
h. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Fish and Wildlife:

5e. No construction activity will be permitted in the East Fork of Rock Creek between September 1 and September 25. The diversion dam and equipment / access crossing will be constructed before or after this window to allow for Bull Trout migration. The access crossing will also be designed to accommodate the anticipated base flow of 6cfs at 3fps velocity. (See Appendix A for additional information). The temporary diversion dam and equipment crossing would not create a barrier to bull trout or other fish.

5f. A Natural Heritage file search indicated that Bull trout (a threatened species) and Westslope cutthroat trout (species of special concern) are found in the East Fork of Rock Creek. The lynx is also listed as threatened in the western third of Montana (including the project area). No other wildlife or fish species of special concern is known to exist in the vicinity of the project.

5g. The use of erosion control structures (straw bales, erosion control mats, silt fencing etc.), best management practices, project timing (construction between Sept. 1 and 25 – see 5e.), and maintaining downstream flows (as recommended by the DEQ and DFWP) will greatly reduce the magnitude of any potential impacts to bull trout and other fish within the construction area. It is not anticipated that the proposed action would significantly impact bull trout, bull trout migration or bull trout spawning activity (which occurs primarily in September), westslope cutthroat trout, lynx or any other fish or wildlife species.

Local wildlife within the immediate vicinity of the project location (e.g. mule and whitetail deer, elk, moose, black bear, mountain lion, raptors, waterfowl) would most likely avoid the immediate work site during construction. This impact would be minor, non-significant and end upon project completion.

All non-significant but potentially adverse impacts to fish and wildlife resources will be temporary, minor, short-term and end upon completion of the project. The NRCS Bull Trout Biological Assessment (BA) is provided in Appendix B. The BA findings indicate that adverse impacts to Bull Trout from the proposed action are minimal and would be mitigated to non-significant levels by following the stipulations set forth in the DFWP 124-Permit. The USFWS has authorized the project to proceed and is in the process of developing an Agreement in Principle (AIP) that would allow for the issuance of a temporary, incidental take permit for Bull Trout for the entire Flint Creek Project. The AIP would be issued under the condition that the DNRC would replace the existing diversion on the main canal with a new structure that would include a fish screen to prevent bull trout from entering the canal. The new diversion and fish screen would be installed within 5 years. Once the new diversion and fish screen are in place the temporary take permit would become permanent.

B. HUMAN ENVIRONMENT

6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Increases in existing noise levels?			X			6a.
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Noise/Electrical Effects (attach additional pages of narrative if needed):

6a. There will be a temporary increase in noise levels during construction. This would end after completion of the construction activity. There are no residences adjacent to the site that would be disturbed by the activity.

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflict with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Increase regulatory restrictions on private property?		X				
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Use (attach additional pages of narrative if needed):

8. <u>RISK/HEALTH HAZARDS</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Risk/Health Hazards (attach additional pages of narrative if needed):

9. <u>COMMUNITY IMPACT</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impact (attach additional pages of narrative if needed):

10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				10a.
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?		X				
e. Define projected revenue sources						10e.
f. Define projected maintenance costs.						10f.
g. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (attach additional pages of narrative if needed):

10a. The proposed action would not have an effect upon or result in a need for new or altered governmental services.

10e. The DNRC State Water Projects Bureau, USDA Natural Resources Conservation Service and the Flint Creek Water Users Association will provide funding for the project. Funding sources are identified on page 5, Section 7 (b).

10f. All maintenance costs associated with the Project will be the responsibility of the Flint Creek Water Users Association.

** 11. AESTHETICS/RECREATION	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?				X		11a.
b. Alteration of the aesthetic character of a community or neighborhood?			X			
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings?				X		11c.
d. Will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted?			X			
e. Other:			X			

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (attach additional pages of narrative if needed):

11 a & c. Construction will temporarily affect the aesthetics of the area in the short-term. Some anglers may be impacted. The area receives light angling use as the project is located primarily on private land. The quality of the recreational opportunities and setting may be temporarily impacted. The effects will be minor, short-term and non-significant and end with the completion of the project.

12. <u>CULTURAL/HISTORICAL RESOURCES</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				12a.
b. Physical change that would affect unique cultural values?		X				12b
c. Effects on existing religious or sacred uses of a site or area?		X				12c.
d. Will the project affect historic or cultural resources?		X				12d.
e. Other:		X				12e.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (attach additional pages of narrative if needed):

12a-e. The proposed project will not result in the destruction, disturbance or alteration of any known site, structure, or object of prehistoric, cultural, religious, sacred, historic or paleontological importance.

SIGNIFICANCE CRITERIA

13. <u>SUMMARY EVALUATION OF SIGNIFICANCE</u>	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
Will the proposed action, considered as a whole:						
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				13a.
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. Is the project expected to have organized opposition or generate substantial public controversy?		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Significance Criteria (attach additional pages of narrative if needed):

13a. This EA found no significant impacts to the human or physical environment from the proposed action.

PART VI. NARRATIVE EVALUATION AND COMMENT

This EA did not reveal any significant negative impacts to the physical and human environment stemming from the proposed action. No threatened or endangered species would be significantly affected, and no unique or sensitive physical, cultural or historic features would be disturbed. The impacts associated with the actual construction will be short-term, minor and end with the completion of the project. Impacts associated with potentially small increases in the sediment loads, weed proliferation, fish and wildlife stress, and the quality of the recreational experience will be mitigated by project timing, maintaining in-stream flows, providing upstream and downstream fish passage, reclamation, reseeding, weed control efforts, and the implementation of all recommended best management practices. The NRCS Bull Trout Biological Assessment (BA) is provided in Appendix B. The BA findings indicate that adverse impacts to Bull Trout from the proposed action are minimal and would be mitigated to non-significant levels by following the stipulations set forth in the DFWP 124-Permit. The U.S. Fish and Wildlife Service has authorized the project to proceed. The proposed project will not affect public safety or the beneficial uses of reservoir water.

References:

1. Biological Assessment for USDA, NRCS – Replacement of an Irrigation Diversion Siphon through the East Fork of Rock Creek that is likely to Adversely Affect the Threatened Bull Trout, NRCS Montana State Office, Bozeman, MT. March 2008.
2. Consultation with the U.S. Fish and Wildlife Service, Helena Field Office, Helena, MT. February 2008.
3. Consultation with Mr. Brad Liermann, MT Department of Fish, Wildlife and Parks Fisheries Biologist, Region 2, Philipsburg, MT. 2007.
4. Consultation with the MT Department of Environmental Quality, Water Protection Bureau, Helena, MT. November 2007
5. East Fork Siphon Replacement Final Design Report, HKM Engineering, Helena MT. November 2007
6. Consultation with the U.S. Army Corps of Engineers, Helena MT. Regulatory Office, October 2007
7. Species of Special Concern File Search, Montana Natural Heritage Program, Helena, MT. August 2007.
8. Consultation with the State Historic Preservation Office, Helena, MT. January 2006
9. East Fork Siphon Replacement, No Action Alternative. Natural Resources Conservation Service, Columbia Basin Area Office, Missoula, MT. 2003
10. Montana Water Law. MT Department of Natural Resources and Conservation, Water Resources Division, Helena MT. 2003
11. A Guide to the Montana Environmental Policy Act, John Munding and Todd Everts, 1998. Revised by Larry Mitchell, 2004 and Todd Everts, 2006. Published by the Legislative Environmental Policy Office, Environmental Quality Council.
12. A Guide to Stream Permitting in Montana, MT DNRC, Conservation Districts Bureau, 1625 11th Ave. Helena, MT 59620. First issued April 1990, revised June 1993, Oct. 1996, March 1997, Sept. 2000 and Jan. 2005.
13. State Water Conservation Projects, MT DNRC, Engineering Bureau, Water Resources Division. Helena, MT March 1977.
14. Climax Vegetation of Montana Based on Soils and Climate, U.S. Dept. of Agriculture, Soil Conservation Service, Bozeman, MT September 1976